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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/213,984
Filing Date: December 17, 1998
Appellant(s): DIEPSTRATEN ET AL.

J. Joel Justiss
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/21/2004.

(1) ***Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

(2) ***Related Appeals and Interferences***

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A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-22 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,528,513	Vaitzblit et al.	9-1996
6,009,454	Dummermuth et al.	12-1999
5,239,652	Seibert et al.	8-1993
6,256,659	McLain et al.	7-2001
5,713,038	Motomura	1-1998

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Vaitzblit et al. (5,528,513).

3. Vaitzblit et al. taught the invention (claims 1, 4 and 8, 11) as claimed including a an event recorder and event acknowledger (col. 4, lines 48-60); foreground controller (figure 1, 158) for activating the task according to priority (see abstract) and in response to events (col. 4, lines 43-60), and a background controller operating in a cyclical manner (col. 5, lines 15-17 and Figure 1, 100).

4. As to claims 2 and 9, Vaitzblit et al. taught masking (col. 4, lines 43-60).

5. As to claims 3 and 10, Vaitzblit et al. taught storing the events therefore the reference taught at least a Flip-Flop (col. 3, line 55- col. 4, line 67).

6. Claims 5, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaitzblit et al. (5,528,513) as applied to claims 1, 8, and above, and further in view of Dummermuth et al. (6,009,454).

It would have been obvious to one of ordinary to replace the time slice scheduling of Vaitzblit et al. with the instruction count as expressly suggested by Dummermuth et al. (Col. 3, lines 22-23).

7. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaitzblit et al. (5,528,513) as applied to claims 1 and 8 above, and further in view of Seibert et al. (5,239,652).

Vaitzblit et al. failed to disclose placing the processor in an idle state. Seibert et al. taught place a processor in idle state in response to inactivity. It would have been obvious to combine the teachings to allow for the reduction of power consumption.

8. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaitzblit et al. as applied to a claims 1 and 8 above, and further in view of McLain et al. (6,256,659).

As to claims , It would have been obvious to one of ordinary to include the teaching of vectoring as suggested by McLain, Jr. et al. (Col. 12, lines 63-67), to gain the benefit of allowing the process to resume at a later time when it was interrupted.

9. Claims 15-18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaitzblit et al. as applied to claims 1- 4 and 8-11 above, and further in view of Motomura (5,713,038).

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Vaitzblit et al. taught the substantially invention (claims 15 and 18) as claimed including a an event recorder and event acknowledger (col. 4, lines 48-60); a foreground controller (figure 1, 158) for activating the task according to priority (see abstract) and in response to events (col. 4, lines 43-60), and a background controller operating in a cyclical manner (col. 5, lines 15-17 and Figure 1, 100).

Vaitzblit et al. did not teach a plurality of register sets and the interconnection of the plurality of register sets with the execution core. Motomura taught the use of a plurality of register sets and the interconnection of the plurality of register sets with the execution core. It would have been obvious to one of ordinary skill in the data processing art to modify the teaching of Vaitzblit et al. with that of Motomura to realize high speed and more flexible context switching, in an conventional processor.

10. As to claim 22, It would have obvious to one of ordinary skill in the data processing art to included the teaching of Vaitzblit et al. and Motomura, to gain the benefit of the hierarchical scheduling technique and to realize high speed and more flexible context switching, in an general-purpose computer.

11. As to claims 16, Vaitzblit et al. taught masking (col. 4, lines 43-60).

12. As to claim 17, Vaitzblit et al. taught storing the events therefore the reference taught at least a Flip-Flop (col. 3, line 55- col. 4, line 67).

13. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaitzblit et al. (5,528,513) in view of Motomura (5,713,038) as applied to claim 15 above, and further in view of Dummermuth et al. (6,009,454).

It would have been obvious to one of ordinary to replace the time slice scheduling of Vaitzblit et al. with the instruction count as expressly suggested by Dummermuth et al. (Col. 3, lines 22-23).

14. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaitzblit et al. (5,528,513), Dummermuth et al. (6,009,454) and Motomura (5,713,038) as applied to claim 15 above, and further in view of Seibert et al. (5,239,652).

The combined teachings failed to disclose placing the processor in an idle state. Seibert et al. taught place a processor in idle state in response to inactivity. It would have been obvious to combine the teachings to allow for the reduction of power consumption.

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15. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaitzblit et al. and Motomura as applied to a claim 15 above, and further in view of McLain et al. (6,256,659).

16. As to claim 21, It would have been obvious to one of ordinary to include the teaching of vectoring as suggested by McLain, Jr. et al. (Col. 12, lines 63-67), to gain the benefit of allowing the process to resume at a later time where it was interrupted.

(11) Response to Argument

It first should be noted that the Appellant's Summary of the Invention is not commensurate in scope with the **Claimed Invention**.

Appellant begins by summarizing for three paragraphs, the Vaitzblit reference.

Appellant argues Vaitzblit does not specifically address acknowledging events and especially does not teach acknowledging events based on code of a currently-active context as recited in Claims 1 and 8.

In Response

The code of a currently-active context is the task , as the specification is directed to a task controller, which determines which task is to be active at a current time. Acknowledging an event as set forth in the specification is to change the currently active task and it's state.

Further Appellant states "Additionally, the Appellants point out that the limitation in Claims 1 and 8 is "based on code of a currently active context" not just "based on code." Vaitzblit does not teach this limitation but actually teaches against it since Vaitzblit teaches preempting a currently running task with another task having a higher priority. Thus, a currently running task would not be preempted by another task that is the same. On the contrary, preemption would only occur for a task having a higher priority. Vaitzblit therefore appears to teach that acknowledgment would only occur for those tasks having a higher priority instead of for those tasks that are relevant to a running context or, more specifically, based on code of a currently-active context."

In Response

The code of the currently active context is the task. The appellant states that "Vaitzblit therefore appears to teach that acknowledgment would only occur for those tasks having a higher priority instead of for those tasks that are relevant to a running context or, more specifically, based on code of a currently-active context." As the code of the currently active is the task, Appellant's argument confirm

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Examiner's position. Further the claims do not set forth that every event is acknowledged. Therefore appellant suggestion of teaching away is not commensurate in scope with the claim.

Appellant alleges Vaitzblit teaches against acknowledging events based on code of a currently-active context. Instead, Vaitzblit teaches preempting tasks based on priority. Vaitzblit, therefore, does not teach or suggest each and every element of Claims 1 and 8.

In Response

As the task and the code of a currently-active context are equivalent. There as the priority is based on the particular function the task performs, preempting task based on priority is acknowledging (changing the currently active task and it's state and preempting is the first step in changing to a new task) based on the code of the currently active context.

Appellant argues that Motomura does not cure the deficiencies of Vaitzblit but has only been cited to teach a plurality of register sets and the interconnection of the plurality of register sets with an execution core. (second Final Rejection, page 5). The cited combination of Vaitzblit and Motomura, therefore, fails to teach or suggest all of the elements of independent Claim 15 and does not provide a prima facie case of obviousness thereof.

In Response

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element, Appellant's arguments amount to a general allegation of patentability.

Appellant argues "Dependent Claims 2, 9 and 16 additionally require masking others of the events as a function of each context, and thereby introduce patentably distinct elements in addition to the elements recited in Claims 1, 8 and 15, respectively. Vaitzblit nor the cited combination of Vaitzblit and Motomura, however, teach or suggest masking others of the events as a function of each context in combination with the limitations of Claims 1, 8 and 15, respectively."

In Response

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element, **In Response**

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element, Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the

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language of the claims patentably distinguishes them from the references. As for the teaching of the mask see the rejection of record.

Appellant argues "Vaitzblit nor the cited combination of Vaitzblit and Motomura, however, teach or suggest an event recorder embodied in at least one flip-flop within the context controller in combination with the limitations of Claims 1, 8 and 15, respectively. Thus, Vaitzblit does not teach each and every element of Claims 3 and 10 and the cited combination of Vaitzblit and Motomura does not establish a prima facie case of obviousness of dependent Claim 17. Claims 3 and 10, therefore, are not anticipated by Vaitzblit and Claim 17 is not obvious over Vaitzblit and Motomura."

In Response

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element, Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. As for the teaching of the at least one flip-flop see the rejection of record.

Appellant argues "Vaitzblit nor the cited combination of Vaitzblit and Motomura, however, teach or suggest activating contexts corresponding to foreground tasks based on priority and in response to the events and cyclically activating contexts corresponding to the background tasks subject to activation of the contexts corresponding to the foreground tasks in combination with the limitations of Claims 1, 8 and 15, respectively. Thus, Vaitzblit does not teach each and every element of Claims 4 and 11 and the cited combination of Vaitzblit and Motomura does not establish a prima facie case of obviousness of dependent Claim 18. Claims 4 and 11, therefore, are not anticipated by Vaitzblit and Claim 18 is not obvious over Vaitzblit and Motomura."

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In Response

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element. Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. As to activating contexts corresponding to foreground tasks based on priority and in response to the events and cyclically activating contexts corresponding to the background tasks subject to activation of the contexts corresponding to the foreground tasks, see rejection of record.

Appellant argues " the cited combination of Vaitzblit, Motomura and Dummermuth does not show each of the background tasks accomplishes an equal amount of work before a cycle of background processing repeats. "

"The Examiner asserts that it would be obvious to modify Vaitzblit to make each background task accomplish an equal amount of work before a cycle of background processing repeats since Vaitzblit suggest processing under a guaranteed time frame. (second Final Rejection, page 3). "

"The Appellants, however, do not understand how one skilled in the art would be so motivated since Vaitzblit teaches time slice scheduling. (Column 5, lines 1-33). On the contrary, a guaranteed time frame would appear to teach away from background tasks accomplishing an equal amount of work before a cycle of background processing repeats since a guaranteed time frame may not allow an equal amount of work before repeating. This is especially true considering the priority preempting of Vaitzblit."

In Response

As noted in the previous response, Appellant argument begins (see appeal brief section G for text) with an general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references and therefore fail to comply with 37 CFR 1.111(b). In paragraph 3, above Appellant presents an argument , " Appellants ...do not understand how one skilled in the art would be so motivated since Vaitzblit teaches time slice scheduling." directed to solely to the Vaitzblit reference, It should be noted Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Dummermuth et al. was cited for the teaching of instruction slicing.

Appellant states "... a guaranteed time frame would appear to teach away from background tasks accomplishing an equal amount of work before a cycle of background processing repeats since a

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guaranteed time frame may not allow an equal amount of work before repeating. This is especially true considering the priority preempting of Vaitzblit". It is noted that the claims set forth that the before a cycle of background processing repeats. It is irrelevant whether the task are preempted, as the claims require that every background task receives it's turn at being executed before another background task is allowed to repeat. Vaitzblit sets forth that "General purpose tasks that are ready for execution are placed on the GP ready queue 108, which is served in a round-robin fashion." Therefore each task receives a turn before the cycle of background processing repeats.

Appellant argues "Vaitzblit and Seibert nor Vaitzblit, Motomura and Seibert teach or suggest placing a processor in an idle state when all foreground and background task are inactive in combination with the limitations of Claims 1 and 8 and Claim 15, respectively. Thus, the cited combinations of Vaitzblit, Motomura and Seibert do not establish a prima facie case of obviousness of dependent Claims 6, 13 and 20. Claims 6 and 13, therefore, are nonobvious over the cited combination of Vaitzblit and Seibert and Claim 20 is nonobvious over the cited combination of Vaitzblit, Motomura and Seibert."

In Response

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element. Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. See the rejection of record for details of the newly recited element .

Appellant argues" The cited combination of Vaitzblit and McLain nor the cited combination of Vaitzblit, Motomura and McLain teach or suggest a foreground task controller that is adapted to activate a context corresponding to a particular foreground task by vectoring to a software-selectable memory location in combination with the limitations of Claims 1, 8 and 15. Thus, Vaitzblit and McLain nor Vaitzblit, Motomura and McLain establish a prima facie case of obviousness of dependent Claims 7, 14 and 21, respectively."

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In Response

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element. Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. See the rejection of record for details of the newly recited element .

Appellant argues "Dependent Claim 22 additionally requires the processor forms a portion of a general-purpose computer, and thereby introduces patentably distinct elements in addition to the elements recited in independent Claim 15. Vaitzblit and Motomura, however, do not teach or suggest the processor forms a portion of a general-purpose computer in combination with the limitations of Claim 15. Thus, Vaitzblit, Motomura and McLain do not establish a prima facie case of obviousness of dependent Claim 22. Accordingly, Claim 22 is nonobvious over Vaitzblit, Motomura and McLain."

In Response

As has been shown by Appellant's own interpretation of the reference that Vaitzblit teaches the alleged missing element. Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. See the rejection of record for details of the newly recited element .

In conclusion, as has been shown that by Appellant's interpretation of the Vaitzblit that the alleged missing element is taught as would understood by one of skill in the art and that the remaining arguments merely comprise a recitation of the dependent claims' newly added element and an allegation that the combination is not taught or obvious. In view of the deficiency in the arguments and the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,
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PRIMARY EXAMINER

September 2, 2004

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